SEKOLAH BUKIT SION – HIGH SCHOOL

AY 2020-2021

MATHEMATICS (EXTENDED) 0580

CHAPTER TEST
LINEAR PROGRAMMING

NAME: _____ **CLASS:** _____ **DATE:** _____

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INSTRUCTIONS:

1. Click the quizziz link added into the assignment for the Part One of the Test.

2. For Part Two, use an appropriate **graph/grid paper** and **pencil** for accuracy.
   Those that are not done on a grid paper may be given deduction marks

3. Once you are done, insert the **pdf printout** of your Part Two in the assigned page of this Chapter Test. ***Do not "Add work"*** **as it becomes a different file. Your work should be found inside/within the the Chapter Test page that I sent.**

4. **Do not use highlighter** or **correction tape** in any of the methods specified in item #1.

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Part II – On Graph Paper

The following table shows some corresponding values of x and y for the function $y = x + \frac{1}{x} - 1$, correct to 1 decimal place.

x	-4	-3	-2	-1	-0.7	-0.2	0	0.2	0.7	1	2	3	4
y	-5.3	-4.3	-3.5	h	-3.1	k	m	4.2	n	1	p	2.3	3.3

(a) Calculate the values of h, k, m, n and p.

Answers: _____ [4]

(b) Using a scale of 2 cm to represent 1 unit on both axes, draw the graph of $y = x + \frac{1}{x} - 1$, for $-4 \leq x \leq 4$. [4]

(c) Find the value/s of

(i) y if x is -1.5 and 2.2.

Answers: _____ _____ [2]

(ii) x if y = -1 and 2.

Answers: _____ _____ [2]

(d) **By drawing a tangent at $x = 3$**, find the gradient of the curve at the said value of x. [3]

(e) **Using your graph and by drawing a suitable straight line**, solve the following equations. [10]

(i)	$x + \frac{1}{x} - 4 = 0$	*Straight Line*
		Solutions:
(ii)	$x + \frac{1}{x} - 1 = x$	*Straight Line*
		Solutions:
(iii)	$x + \frac{2}{x} + 4 = 0$	*Straight Line*
		Solutions: